

ship July 27

Work Order ID 148768

148768

ASAP Page 1

Wednesday, July 06, 2016 3:56:16 PM

Item ID: DSI 9670-013 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Heli-Access-Step Modification
 Start Date: 7/11/2016 Start Qty: 1.00 *1* Cust Item ID:
 Required Date: 7/13/2016 Req'd Qty: 1.00 *1* Customer:
 Reference:

Approvals: Process Plan: dem Date: 11/07/06 Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
DSI 9670	A								

100
 100
 DC
 Doc.Control -USB or Paperwork
 DOCUMENT CONTROL
 Memo
 Photocopy bluefile & type labels per PPP DSI9670-013 CHG001
 0.00
 0.00

SMB
 16/7/22

110
 110
 Packaging
 Packaging
 Pick Kit
 Memo
 0.00
 0.00

PK

JUL 07 2016

120
 120
 QC
 Quality Control
 QC4- 100% Inspect kits for completeness
 Memo
 0.00
 0.01

SMB
 16/7/22

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
					QC / QA Coordinator Approval				
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER :									

Work Order ID 148768***148768***

Page 2

Wednesday, July 06, 2016 3:56:16 PM

Item ID: DSI 9670-013 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Heli-Access-Step Modification
Start Date: 7/11/2016 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 7/13/2016 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
130	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP DSI9670-013 Location: _____								
		Sold							
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.02							
Quality Control									

SMB
16/7/22

DAS
21
9-89
2m

JUL 22 2016
16/07/22

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Picklist Print

Wednesday, July 06, 2016 3:56:15 PM

Work Order ID: 148768

148768

Parent Item: DSI 9670-013

DSI 9670-013

Parent Item Name: Heli-Access-Step Modification

Start Date: 7/11/2016

Required Date: 7/13/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 14.01.10 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4964-043		Manufactured	No				Each	0.0000		1			DAS G 9-89
D4964-043									**				B148766
Mid Step Leg Assembly													
MS20600-AD4W4		Purchased	No				Each	1,852.000		16			PC DAS 8-89
MS20600-AD4W4									**				
Rivets													

Smb

Location	Loc Qty	Loc Code
CCK005	1270	
M133990	770	
M134955	500	
LG	106	
M133694	106	
ST308	176	
M133990	176	
WA003	300	
M133990	300	
		16

JUL 07 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY						
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date ☐	☐	Manufacturing Process	☐	OTHER :						
Misidentified ☐	☐	Past Due	☐							

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D350-591 REV. G OR EARLIER AND
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D350-591 REV. 3 OR EARLIER

REF CANADIAN STC: SH92-6
REF FAA STC: SH967NE

1.0 PURPOSE

The DSI 9670-011 Step Modification Kit has been made available for operators who would like to lower a D350-591-121/-122 High Skid Step Assembly to improve compatibility with a D350-607-XXX Basket installation.

The DSI 9670-013 Step Modification Kit has been made available for operators who would like to lower a D350-591-213/-214/-311/-312 High Skid Step Assembly to improve compatibility with a D350-607-XXX Basket installation.

2.0 INSTALLATION

2.1 FOR D350-591-121/-122 High Skid Step Assembly

2.1.1 Remove the Step Assembly from the aircraft. Retain all fasteners.

2.1.2 Remove qty (16) rivets fastening Step Leg Assembly D2582 to the D2351-041/-042 Step Assembly. See Figure 1. Drill a ϕ 0.25" hole in the bottom of the step 0.25" from the forward end. Hold the step vertically with the hole end down. Inject Sikaflex/Proseal into the hole to 'capture' any rivet stems inside the step and cover the drilled hole. Allow to cure before proceeding.

2.1.3 Install Mid Step Leg Assembly D4964-041 using qty (16) NASM20600AD4W4 rivets, (8 per side). See Figure 2.

2.1.4 Touch up paint finish as required with chemical film material (Alodine 1200 or 1201) per MIL-C-5541, one coat of MIL-P-85582 or MIL-P-23377 primer, and 2-3 coats of MIL-C-85285 polyurethane coating to match original finish. Clean off any flaking anti-skid and touch up with Black Anti-Skid paint per MIL-W-5044 Type 2.

2.1.5 Re-install the Step Assembly on to the aircraft per ICA-D350-591.

2.2 FOR D350-591-213/-214/-311/-312 High Skid Step Assembly

2.2.1 Remove the Step Assembly from the aircraft. Retain all fasteners.

2.2.2 Remove qty (16) rivets fastening Step Leg Assembly D3065-041 and Spacer D3066-1 (2 PL) to D3078-041/-042 Step Assy or D3272-041/-042 Step Assy. Retain Spacer D3066-1 (2). See Figure 1. Drill a ϕ 0.25" hole in the bottom of the step 0.25" from the forward end. Hold the step vertically with the hole end down. Inject Sikaflex/Proseal into the hole to 'capture' any rivet stems inside the step and cover the drilled hole. Allow to cure before proceeding

2.2.3 Install Mid Step Leg Assembly D4964-043 and Spacer D3066-1 using qty (16) NASM20600AD4W4 rivets, (8 per side). See Figure 3.

2.2.4 Touch up paint finish as required with chemical film material (Alodine 1200 or 1201) per MIL-C-5541, one coat of MIL-P-85582 or MIL-P-23377 primer, and 2-3 coats of MIL-C-85285 polyurethane coating to match original finish. Clean off any flaking anti-skid and touch up with Black Anti-Skid paint per MIL-W-5044 Type 2.

2.2.5 Re-install the Step Assembly on to the aircraft per ICA-D350-591.

3.0 WEIGHT AND BALANCE

There is negligible weight change with this modification.

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: 
D. SHEPHERD (DE # 02)

DATE: 13.10.30
CERT. NO.: SH92-6
ISSUE NO.: 11

A	NEW ISSUE	DB	13.10.30
REV.	DESCRIPTION	BY	DATE
DESIGN	DB	DART AEROSPACE LTD	
DRAWN	DB	HAWKESBURY, ONTARIO, CANADA	
CHECKED	B	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9670	SHEET 1 OF 3
APPROVED		TITLE	SCALE
DE APPR.		HIGH SKID MID STEP MODIFICATION KIT	NTS
DATE	13.10.30	COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

4.0 PARTS LIST

FOR D350-591-121/-122 High Skid Step Assembly (FIGURE 2)

ITEM	QTY -011	P/N	DESCRIPTION
	X	DSI 9670-011	STEP MODIFICATION KIT
1	1	D4964-041	MID STEP LEG ASSY
2	16	NASM20600AD4W4	RIVET

FOR D350-591-213/-214/-311/-312 High Skid Step Assembly (FIGURE 3)

ITEM	QTY -013	P/N	DESCRIPTION
	X	DSI 9670-013	STEP MODIFICATION KIT
1	1	D4964-043	MID STEP LEG ASSY
2	16	NASM20600AD4W4	RIVET

DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN	DB	
CHECKED	JB	DRAWING NO. REV. A
MFG. APPR.	N/A	DSI 9670 SHEET 2 OF 3
APPROVED	140	TITLE HIGH SKID MID STEP
DE APPR.	140	MODIFICATION KIT SCALE
DATE	13.10.30	NTS
COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.		

REMOVE RIVETS
8 PL PER SIDE

D2582 STEP LEG ASSY
OR
D3065-041 STEP LEG ASSY

REMOVE AND RETAIN
EXISTING HARDWARE

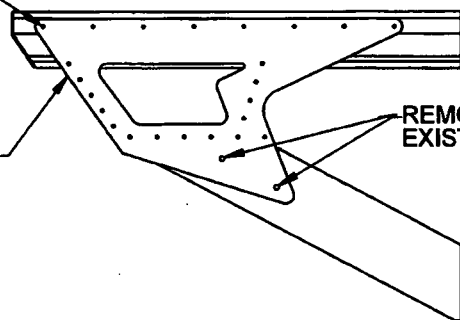


FIGURE 1

(EXISTING D350-591-121/-122/-213/-214/-311/-312 CONFIGURATION REMOVAL)

NASM20600AD4W4
8 PL PER SIDE

DRILL $\varnothing 0.25$ HOLE,
THIS END

D4964-041 MID STEP
LEG ASSY

RE-INSTALL USING
EXISTING HARDWARE

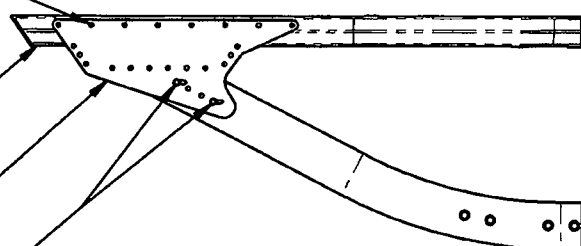


FIGURE 2: DSI 9670-011 CONFIGURATION

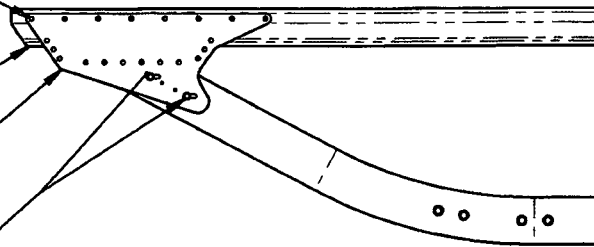
(TO MODIFY D350-591-121/-122 STEPS)

NASM20600AD4W4
8 PL PER SIDE

DRILL $\varnothing 0.25$ HOLE,
THIS END

D4964-043 MID STEP
LEG ASSY

RE-INSTALL USING
EXISTING HARDWARE



RE-INSTALL
D3066-1 SPACER

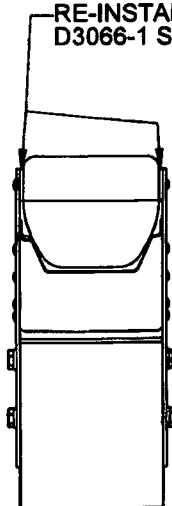


FIGURE 3: DSI 9670-013 CONFIGURATION

(TO MODIFY D350-591-213/-214/-311/-312 STEPS)

DESIGN	DB	DART AEROSPACE LTD	
DRAWN	DB	HAWKESBURY, ONTARIO, CANADA	
CHECKED	13	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9670	SHEET 3 OF 3
APPROVED	140	TITLE	SCALE
DE APPR.	140	HIGH SKID MID STEP MODIFICATION KIT	NTS
DATE	13.10.30	COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	